**Wendy Koo Water, Waste, Energy Course**

**Grade level: Kindergarten Instructor: Shakira Provasoli**

**Content Area – Science July 20, 2017**

**Topic – Plants**

**Time Frame – one hour**

**Professional Goal:**

**Component 3c - Engaging Students in Learning**

**NYS Science Scope and Sequence**

**Trees through the Seasons:**

LE 1.1b - Plants require air, water, nutrients, and light in order to live and thrive.

LE 1.2a - Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die.

LE 4.2a - Growth is the process by which plants and animals increase in size.

LE 5.1a - All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.

LE 3.1b - Each plant has different structures that serve different functions in growth, survival, and reproduction.

This lesson will spark the students’ interest in growing their own plants. They will have hands on experience of growing a plant from a seed, observe the wonders of the growth process and understand the necessary materials and environment to facilitate growth. Some of the materials used in the lesson will be from used materials, thus exposing students to the notion of re-purposing materials to lessen waste.

**Content Objectives:**

**Students will:**

* Observe and describe similarities and differences in the appearance of seeds
* Identify major structures of plants (seeds, roots, stems, leaves)
* Observe, classify, and compare structures of plants
* Understand the life cycle of plants and trees and what they need to grow

**Materials:**

* Seeds (a variety of fruit and vegetable seeds)
* Potting soil
* Used plastic container from home (with 3 holes on the bottom of the container)
* Spoon
* Spray bottle
* Popsicle sticks
* Science notebooks
* Writing tools
* Plant a Seed and Watch it Grow! By Uncle Amon
* Two small plants with roots

**Motivation/Activating Prior Knowledge:**

Teacher will take students on a field trip to the grocery store or supermarket. Teacher will bring students over to the produce section of the supermarket and ask “What do you see? What do you notice about the things you see here?” Students will respond. As a class, we will discuss the names of the different fruits ad vegetables. The students will then discuss the following with their partners: which ones have they eaten before, identify which ones are fruits (seeds) and which ones are vegetables (edible roots, leaves, stems), and describe the physical characteristics of the produce (size, colors, shapes, scent, and texture).

**Mini-lesson:**

Teacher will show students soil and seeds and ask “What do you think we are going to do with these materials?” Students will respond. Teacher will then read Plant a Seed and Watch it Grow! By Uncle Amon. Students will turn and talk to discuss the process of how to plant and take care of seeds. Teacher will record students’ responses onto chart paper. Teacher will also review the needs of plants and the different parts of a plant. Students will go into their science groups.

**Activities:**

Group 1 – Students will draw and label the fruits and vegetables they saw in the supermarket in their science notebook. They will create a T-chart titled “Fruit or Vegetable?” and fill it in correctly. If necessary, picture cards will be provided to refresh the students’ memory.

Group 2 – Students will plant their seeds of choice with the teacher. Students will follow these directions: 1. Use a spoon and fill your plastic container half way with soil. 2. Use your index finger to make three holes in the soil. 3. Pick three of the same seed and put one seed into each hole. 4. Cover the holes with soil. 5. Spray your plant with water and put it by the window for sunlight. Students will write their names and label their plants on popsicle sticks. Students will draw and label the five steps of how to plant a seed in their science notebooks.

Group 3 – Students will observe different kinds of fruit and vegetable seeds. They will discuss with a partner about the kind of seeds they are and their physical characteristics (color, shape, size, texture). The students will match the seeds to the correct fruit or vegetable. The students will then draw and label their responses in their science notebook titled “Seeds.”

Group 4 – Teacher will provide two plants for observation. Students will observe the plant and draw and label the different parts of a plant in their science notebook.

**Whole Class Share**

Students will share: What did you learned today? How do we plant a seed? What should you do to take care of your seeds/plant?

**Assessment Method**

Students will assess themselves using the self-assessment checklist. Teacher will assess students through their oral responses to questions and their writing/drawing samples. Through students’ writings, the teacher will assess whether the students are able to (1) identify the correct order of planting a seed, (2) identify which seeds belong to which fruit or vegetable, and (3) identify the different parts of a plant.

**Extensions**

Students will observe their plants for the next three weeks. They will record their observations in their science notebooks. Students will also observe which seed(s) sprouted first, which plant(s) is/are going the fastest/slowest and why do they think that, the difference in leaf and stem structure, and which pot has the most seeds germinated.

Students will learn how much people depend on plants. They will categorize common plant products found in our school and their homes.

**Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **4** | **3** | **2** | **1** |
| I can tell the steps of planting a seed | I can tell all the steps of planting a seed | I can tell 3-4 steps of planting a seed | I can tell 1-2 steps of planting a seed | I cannot tell the steps of planting a seed |
| I can name the parts of a plant | I can name all the parts of a plant | I can name 3-4 parts of a plant | I can name 1-2 parts of a plant | I cannot name any parts of a plant |
| I can match the seeds to the plant | I can match more than 4 seeds correctly | I can match 3-4 seeds correctly | I can match 1-2 seeds correctly | I cannot match any of the seeds correctly |

**Self Assessment Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student’s Name:** | | | |
| **Skills** | **✔** | **Date** | **Teacher’s Comment** | |
| I can list the steps of planting a seed |  |  |  | |
| I can ask questions about plants |  |  |  | |
| I can draw and label the parts of a plant |  |  |  | |